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MEMORANDUM FOR THE RECORD

SUBJECT: Notes from "The Future of Land-based Missile Forces"  
by Colin S. Gray (Adelphi Paper 141, Winter 1977)

1. Rationale for ICBMs:

- a. Better command and control than sea-based systems.
- b. Short time of flight. These combined allow you to:
  - (1) Take on limited and changing target systems.
  - (2) Take on withhold forces or reloadable silos in a timely manner before they are likely to be utilized.
- c. The relative counter-force capabilities of central strategic forces impacts on the potential willingness of the United States to come to the support of the European allies with conventional or theatre nuclear forces. In short, in trying to "win" that type of a limited war in Europe, the United States' options would be restricted if the Soviets could "win" a strategic nuclear war with a superior counter-force force.
- d. One of the arguments for the continued existence of an ICBM force is that it provides warning for the bomber force, i.e., a depressed trajectory attack on the bomber bases, if it precedes the launch of ICBMs against our silos, provides ample warning for the launch of our ICBMs; if enemy ICBMs are launched to impact on our silos nearly simultaneously with the depressed trajectory SLBMs on the bomber fields, we should have adequate alert of the ICBM launch to get our bombers in the air.
- e. The only viable case for ABM is with a dispersed ICBM force such that the enemy doesn't know precisely where it is at a given time. In short, if the enemy's attack has to be dispersed sufficiently that it is thin against any given ICBM, there is some possibility that an ABM defense can handle that thin system. (This seems like wishful thinking to me with the almost infinite capacity that proliferate decoys.)

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f. (ST -- One point to be viewed is the comparative leverage. If we build a less vulnerable fixed or semi-fixed ICBM system, the costs to the Soviets of patterning it is probably a lot less than the cost of building it; if we go to cruise missiles, the cost to the Soviets of constructing both ballistic missile and cruise missile defense systems will be fantastically larger. There is also a lot of leverage in the cruise missile being able to come in from any direction. This mandates a 360° defense perimeter.)

2. There is a lot of talk in this paper of the incapability of suppressing mobile surface-to-air missile systems. (It seems to me this is a lot of nonsense -- any such system must radiate -- therefore, a change in its location by 5, 10 or 50 kilometers can only provide a marginal improvement in defense against an anti-radiation missile.)

3. The argument against a dyad boils down essentially to the ability to hit time-urgent targets. Is this a real argument, or is it simply the Neanderthals falling back on the one characteristic of fixed ICBMs that cannot be replicated by SLBMs, bombers, and cruise missiles?

4. The other principal argument against a dyad is that its slowness of response would make it seem unlikely that the U.S. would ever employ its strategic nuclear forces first. That is, if events in conventional war and theatre nuclear war in Europe dictated a use of an option of striking against the Soviet Union in some limited manner, the United States would not be credible if the only forces it had to do this were cruise missile and SLBM forces. The former would be too slow in arriving and the latter too uncertain in control to permit possible arrival of these weapons on target without giving the Soviets such warning that their entire force could be launched against our SLBM forces remaining in port and bombers on airfields.

a. (I'm not sure I quite understand this as I don't know where all the Soviet ICBMs are going to go if they haven't much of anything to target.)

b. (I also wonder if GLCMs based in Europe have that long a time of flight into the Soviet Union?)

5. Perhaps the most telling argument against a cruise missile dyad would be the severe strain it would put on SALT. However, this same argument would apply to a number of the other alternative ICBM

basing systems. (The difficulty of counting cruise missiles, however, would be considerably offset by the question of what would be the advantage in having large numbers of them. Presumably they are not a first track weapon because of their long time of flight.)

6. The cardinal issue is whether we can risk going to a dyad while the Soviets still have something of a triad. Chances are they would find it necessary to change their program in the long run, but would our mutual rhetoric appear to place us at a major disadvantage in the interim.

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